



**Upper Mississippi River Basin  
Association**

# **Inter-Jurisdictional Coordination of Water Quality Programs on the Upper Mississippi River**

**Presented to the Mississippi River Forum  
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# Presentation Overview

Upper Mississippi River (UMR)  
Resource and Institutional Setting

UMRBA Background and Role

Challenges in UMR Clean Water  
Act Implementation

Collaborative Efforts in UMR  
Clean Water Act Implementation

Future Efforts and Directions

Questions and Discussion



Upper Mississippi River Basin

# Upper Mississippi River: Resource Setting

189,000 square miles in basin

1,300 miles in total length

850 miles navigable, 816 interstate

Discharge = 9,200 cfs at St. Paul

205,000 cfs at Thebes

Leveed floodplain 3% → 53% →  
83%



# Upper Mississippi River: Resource Setting

23 community water systems serving  
over 2 million people

29 power plants

Water withdrawal over 7 billion gallons  
per day (primarily cooling)

Approximately 300 wastewater  
dischargers

29 locks and dams designed for  
navigations (but limited ability to  
regulate flows)

Over 100 million tons of commodities  
shipped annually (grain more than half  
of total)



# Upper Mississippi River: Resource Setting

More than 250,000 acres in National Wildlife Refuge

Over 120 species of fish, 30 species of mussels, 300 species of migratory birds

Millions of recreational visits per year





# Upper Mississippi River: Institutional Setting

Several federal agencies (USACE, USFWS, USGS, US EPA and others)

Five states, multiple agencies within states (environmental, natural resource, transportation, and others)

Local and regional entities

Commercial interests (shipping, recreation, industry, and others)

Environmental interests (NGOs)

Citizens (residents and river users)

Universities

Professional associations



# UMRBA Background and Role:

## Mission Statement

### Purpose:

Facilitate dialogue and cooperative action regarding water and related land resource issues in the basin

### More specifically:

Serve as a regional interstate forum for the discussion, study, and evaluation of river-related issues of common concern to the States

Facilitate and foster cooperative planning and coordinated management

Create opportunities and means for the States and Federal agencies to exchange information

Develop regional positions on river issues and serve as an advocate of the States' collective interests before Congress and Federal agencies

# UMRBA Background and Role: Origins & History

## Upper Mississippi River Basin Commission

1972	Formed by Governors under the authority of Title II of the 1965 Water Resources Planning Act
1981	Terminated by Presidential Executive Order

## Upper Mississippi River Basin Association

Aug 1981	Joint Governors' Resolution
Dec 1981	Articles of Association signed by Governors' representatives
1983-1984	Governors' Executive Orders
1986	Congressional Consent
1997	Joint Governors' Resolution



# UMRBA Background and Role:

## State Representatives (Gubernatorial Appointees)

Illinois	DNR (Water Division)
Iowa	Agriculture, DNR*, Economic Development, Transportation
Minnesota	EQB (Chair - by State Statute) DNR (Deputy Commissioner)
Missouri	DNR* (Director's Office)
Wisconsin	DNR* (Water Division)

*\* State DNR has both natural resource and environmental quality functions*

# UMRBA Background and Role:

## **Roles of Representatives\***

- **Serve as UMRBA's Board of Directors**
  - Set policy, direction, and priorities
  - Advocate UMRBA perspectives to Congress and Administration
  - Adopt budget
  - Oversee Executive Director's management of organization
- **Bring internally coordinated State positions to UMRBA's deliberations**
- **Engage other state agency staff in UMRBA activities/issues**
- **Use UMRBA as forum for interstate coordination**

*\* Governors typically also appoint one or more alternates to UMRBA.*

# UMRBA Background and Role:

## Role of Federal Advisory Members

- Agriculture (*NRCS*)
- Army Corps of Engineers
- Environmental Protection Agency
- Homeland Security (*FEMA & Coast Guard*)
- Interior (*Fish and Wildlife Service and USGS*)
- Transportation (*Maritime Administration*)

*Federal advisors do not have voting rights*

*Relationship of federal agencies and UMRBA established in bilateral Partnering Agreements*

# UMRBA Background and Role: Meetings

UMRBA holds quarterly meetings

Open to the public...NGOs are important partners

Location rotates

Related meetings held in conjunction

Seek consensus in decisions and voting—1 vote/State

Annual (February) meeting includes the election of Chair and Vice Chair

Also conduct business via conference call as needed

# UMRBA Background and Role:

## UMRBA Committees

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Water Quality Executive Committee	2006
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Water Quality Task Force	1999
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Floodplain Managers Group	1993
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(meet as needed)

Hazardous Spills Coordination Group	1989
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EMP Coordinating Committee	1987
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(formed by the Corps of Engineers, staffed by UMRBA)



# UMRBA Activities:

## General Functions

### **UMRBA focuses on:**

Planning & coordination...forum for discussion

Helping States and Federal agencies work together

Evaluating policies, programs, and laws

Building consensus among the States

Promoting the States' interests

### **UMRBA is not involved in:**

Regulation or land management

Construction or operation of facilities

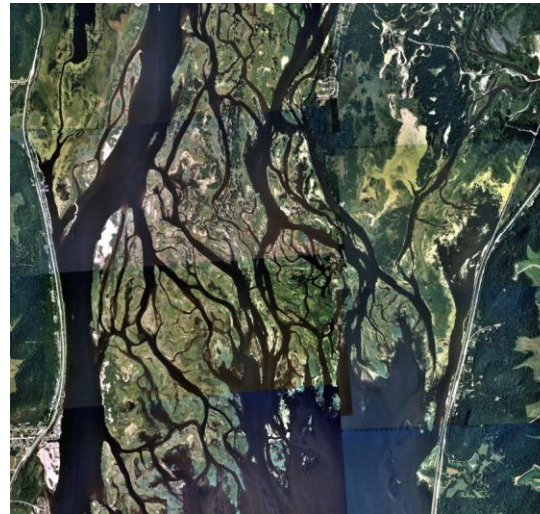
Scientific research or expertise

# Challenges in UMR Clean Water Act (CWA) Implementation: General Considerations

Scale, Complexity, and Diversity of Resource

Multiple Use: Ecosystem, Navigation, Recreation, Water Supply

Institutional Setting: Jurisdictional/Border River Issues



# Challenges in UMR Clean Water Act (CWA) Implementation:

## Clean Water Act Framework

“The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States (NPDES Permit Program) and generating and regulating surface water quality standards (e.g., fecal coliform, metals, dissolved oxygen, nutrients).

States have primacy for implementation, with US EPA direction, approval, and oversight.

# Challenges in UMR Clean Water Act (CWA) Implementation:

## Clean Water Act Framework



# Challenges in UMR Clean Water Act (CWA) Implementation:

## CWA Designated Uses for the UMR

### Minnesota

- Aquatic Life and Recreation Use
- Industrial Consumption Use
- Agriculture and Wildlife Use
- Aesthetic Enjoyment and Navigation Use
- Other Uses

### Iowa

- General Use (includes livestock and wildlife watering, aquatic life, non-contact recreation, crop irrigation, industrial, domestic and other water withdrawal uses)
- Primary Contact Recreational Use
- Warm Water Aquatic Life Use
- Drinking Water Supply Use (intake areas only)

### Missouri

- Irrigation Use
- Livestock and Wildlife Watering Use
- Aquatic Life Use (warm-water fishery)
- Human Health Protection Use (fish consumption)
- Whole Body Contact Recreation Use (except one reach)
- Secondary Contact Recreation Use
- Drinking Water Supply Use
- Industrial Process Water and Cooling Water Use

### Wisconsin

- Fish and Other Aquatic Life Uses (warm water sport fishery)
- Recreational Use
- Public Health and Welfare Use
- Wildlife Use

### Illinois

- General Use (includes aquatic life, agricultural use, secondary contact use, industrial use, and primary contact use where physical configuration permits such use)
- Public and Food Processing Water Supply



# Challenges in UMR Clean Water Act (CWA) Implementation:

## CWA Designated Uses for the UMR

### Comparison of “Major” Designated Uses

		Aquatic Life	Contact Recreation	Drinking Water
<b>Illinois</b>	Entire UMR	X	X	X
<b>Iowa</b>	Minnesota Border – Lock & Dam 14	X	X	
	Lock & Dam 14 – Lock & Dam 15	X	X	X
	Lock & Dam 15 — Iowa River	X	X	
	Iowa River — Burlington water intake	X	X	X
	Burlington water intake — Skunk River	X	X	
	Skunk River — Missouri Border	X	X	X
<b>Minnesota</b>	Entire UMR	X	X	
<b>Missouri</b>	Iowa Border to Missouri River	X	X	X
	Missouri River to Ohio River	X	X*	X
<b>Wisconsin</b>	Entire UMR	X	X	

\*Except for 30 mile segment in St. Louis area.

# Challenges in UMR Clean Water Act (CWA) Implementation:

## Numeric Criteria Applicable to the UMR

<b>Minnesota</b> Ammonia, un-ionized Arsenic Atrazine Chlordane Dissolved Oxygen Fecal Coliform Mercury PCBs Phosphorus Turbidity		<b>Wisconsin</b> Ammonia nitrogen Arsenic Chlordane Dissolved Oxygen Fecal Coliform Mercury PCBs
<b>Iowa</b> Ammonia nitrogen Arsenic Atrazine Chlordane Dissolved Oxygen Fecal Coliform Mercury Nitrate PCBs Turbidity		<b>Illinois</b> Ammonia nitrogen Ammonia, un-ionized Arsenic Atrazine Chlordane Dissolved Oxygen Fecal Coliform Mercury Nitrate PCBs Phosphorus
<b>Missouri</b> Ammonia nitrogen Arsenic Atrazine Chlordane Dissolved Oxygen Fecal Coliform Mercury Nitrate PCBs		

Specific criteria (numeric values) for pollutants listed may vary by state

Criteria and their applicability can also vary by season, location on the river, and use being protected

Primarily chemical/physical parameters and pathogens, integrative biological approaches not yet employed

# Challenges in UMR Clean Water Act (CWA) Implementation:

## **Narrative Criteria Applicable to the UMR**

Each state also has narrative water quality criteria in rule that are applicable to the UMR.

Example (35 IL Adm Code, Part 302.203)

*Waters of the State shall be free from sludge or bottom deposits, floating debris, visible oil, odor, plant or algal growth, color or turbidity of other than natural origin.*

# Challenges in UMR Clean Water Act (CWA) Implementation:

## **Monitoring and Data**

### **UMR Water Quality Data Sources Include:**

#### **State**

CWA program monitoring  
Other state monitoring

#### **Federal**

USGS (LTRMP, NASQAN, NAWQA, special studies)  
USACE (sediment, other water quality)  
US EPA (EMAP, national surveys)

#### **Local/Regional**

Metro Council Environmental Services (sediment, invertebrates, other WQ)  
Water utilities

#### **Citizen and Others**

# Challenges in UMR Clean Water Act (CWA) Implementation: Monitoring and Data

State	Programs Conduct CWA-Specific Monitoring?	State Field Stations Conduct LTRMP Monitoring?	Use Other States' Data?		Use LTRMP Data?***		Use NASQAN Data?	
			<i>Review</i>	<i>Utilize</i>	<i>Review</i>	<i>Utilize</i>	<i>Review</i>	<i>Utilize</i>
IL	Yes (11 stations)	Yes	No	No	Yes	No	Yes	No
IA	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MN	Yes (3 stations)	Yes	Yes	No	Yes	Yes	N/A	N/A
MO	Yes** (1 station)	Yes	No	No	No	No	Yes	Yes
WI	Yes (3 stations)	Yes	Yes	Yes	Yes	Yes	N/A	N/A

\*Information primarily from 2004 UMRBA report.

\*\*Station is shared with USGS.

\*\*\*Some states may only use a portion of LTRMP data, such as just fixed site data.



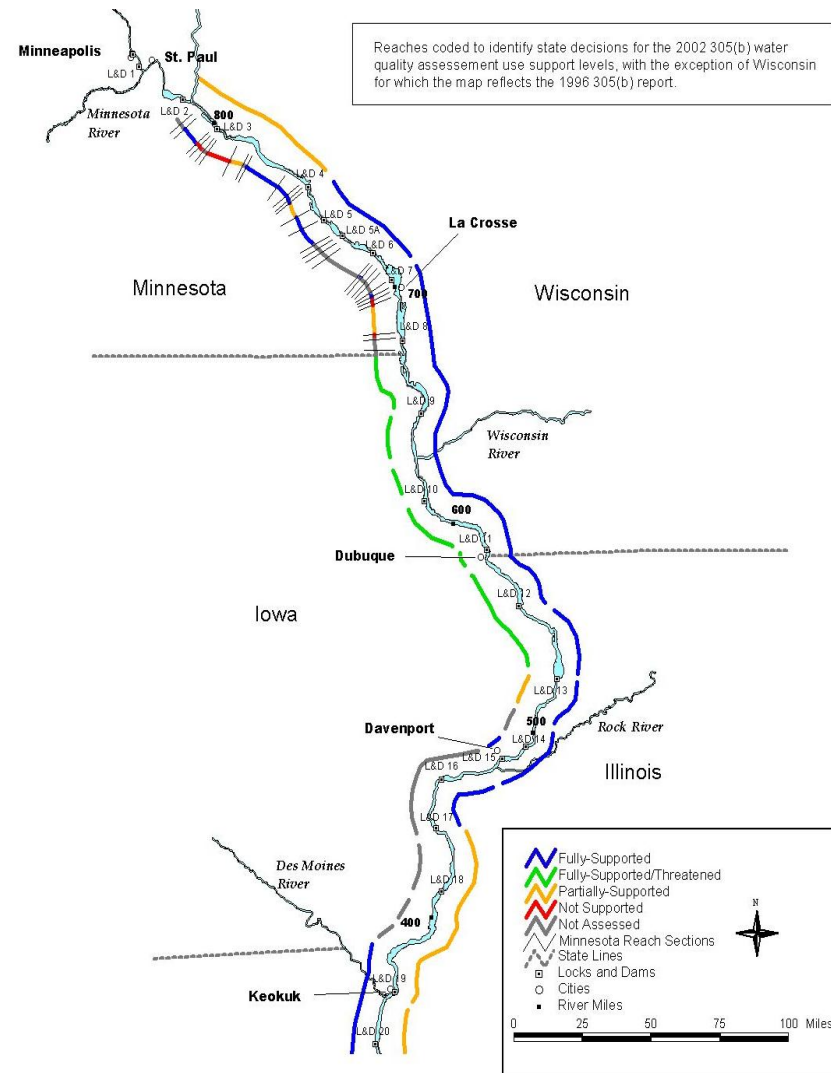
# Challenges in UMR Clean Water Act (CWA) Implementation: Assessment Outcomes

Not all of the river is assessed,  
often due to data limitations

Each state employs its own  
assessment methodology.

Assessments may indicate full  
support, partial support or non-  
support of a use.

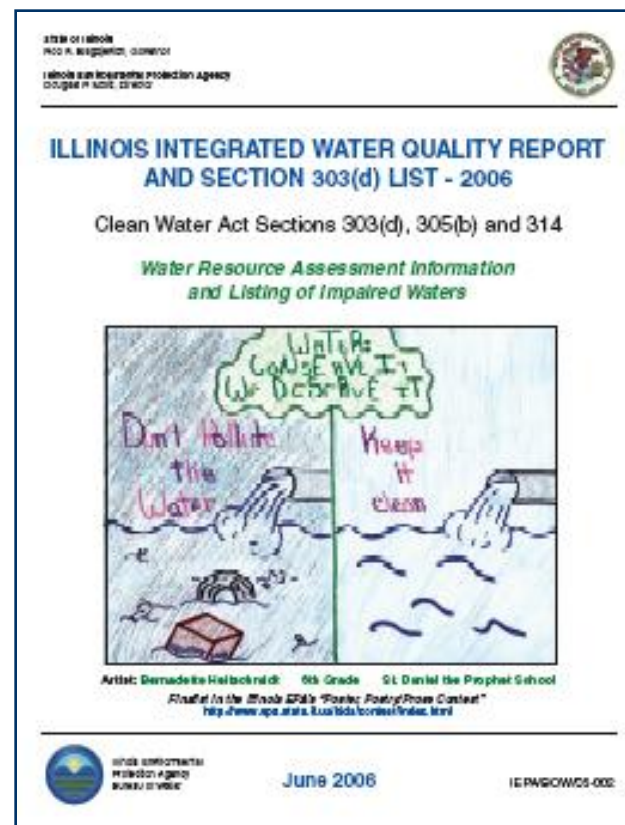
Example at right illustrates 2002  
aquatic life use support  
assessments.



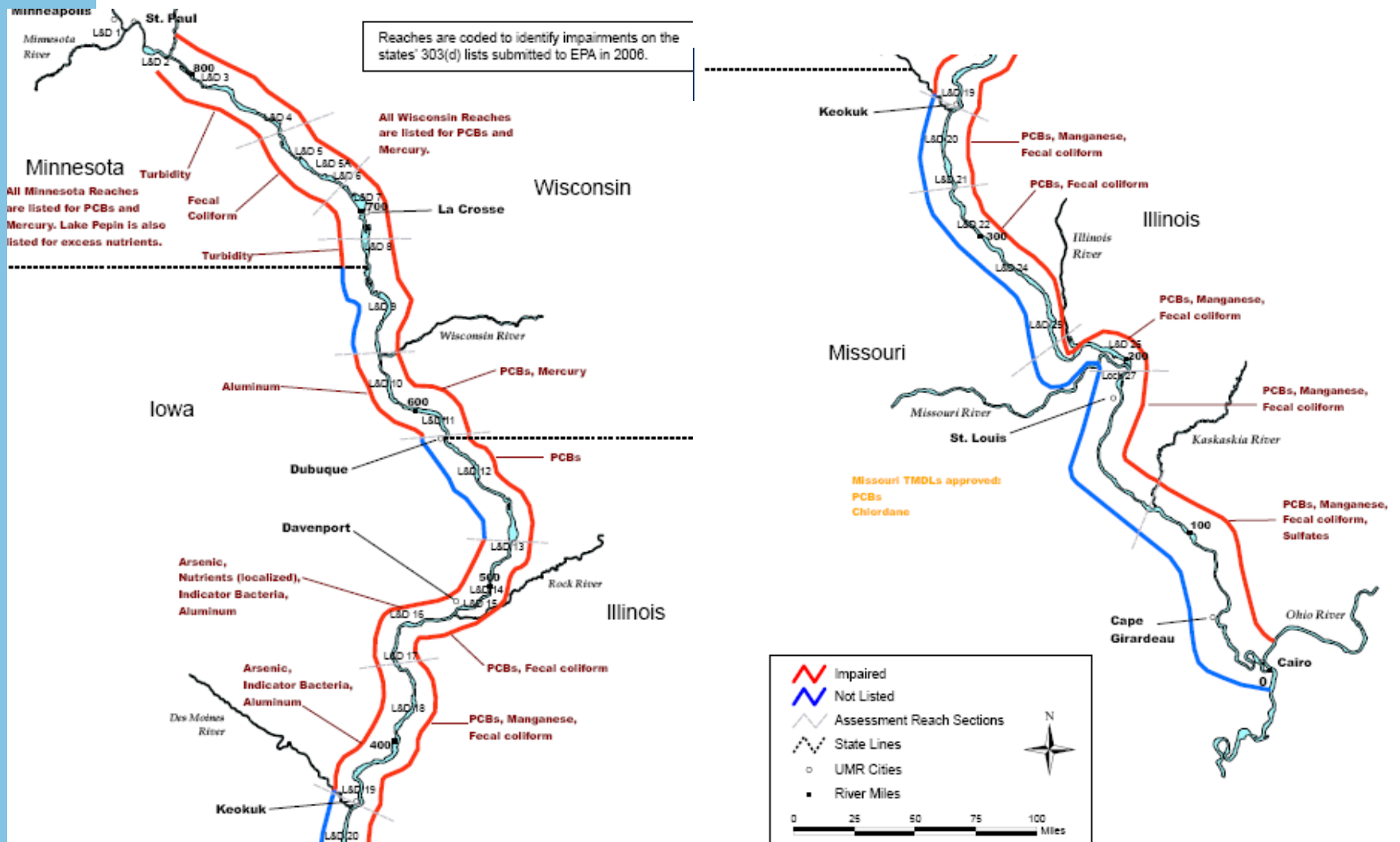
# Challenges in UMR Clean Water Act (CWA) Implementation: Impairment Lists and State Reports

States' most recently completed impaired waters lists and "integrated" state water quality reports:

	Completed 305(b) Report	Approved 303(d) List
IL	2008	2006
IA	2008	2006
MN	2008	2008
MO	2006	2006
WI	2008	2006



# Challenges in UMR Clean Water Act (CWA) Implementation: Impaired Waters Listings



# Challenges in UMR Clean Water Act (CWA) Implementation: Total Maximum Daily Loads (TMDLs)

State	TMDLs in Development		Approved TMDLs	
	<i>Impairment</i>	<i>Reach</i>	<i>Impairment</i>	<i>Reach</i>
<b>Illinois</b>	None		None	
<b>Iowa</b>	Arsenic (Drinking Water)  Nutrients (Aquatic Life)	Pool 15 (Intakes only)  Clinton Area (Localized)	None	
<b>Minnesota</b>	Turbidity and Excess Nutrients (Aquatic Life and Recreation Use)	Lake Pepin	Mercury (Aquatic Life and Recreation Use/Fish Consumption)	Entire UMR in Minnesota (Statewide TMDL)
<b>Missouri</b>	None		Chlordane and PCBs (Human Health Protection Use/Fish Consumption)	Entire UMR in Missouri
<b>Wisconsin</b>	None		None	

# Challenges in UMR Clean Water Act (CWA) Implementation:

## Need Areas for CWA Implementation

### What's Needed?

Coordination/Communication

Consistency

Appropriateness/Fit to Resource

### Where Needed?

Standards (Designated Uses and Criteria)

Monitoring

Assessments/Assessment Methodology

Impaired Waters

Total Maximum Daily Loads (TMDLs) and Implications for Permits

### Why Needed?

Consistent Message to the Public

Consistent Regulatory Expectations

Efficient Allocation of Resources

Improved Protection



# Challenges in UMR Clean Water Act (CWA) Implementation:

## **Additional Challenges/Issues**

**Collaboration with ecosystem restoration and other UMR programs**

**Addressing nutrients and sediment/nonpoint sources**

**Integrating biological approaches**

**Addressing emerging contaminants**

**Lack of dedicated federal funding for the UMR and current constraints in state funding**

# Collaboration in UMR CWA Implementation:

## UMRBA Role - Revisited

### UMRBA is:

- Five UMR State members (IL, IA, MN, MO, WI)
- Federal partners
- Involved in:
  - Water Quality
  - Ecosystem Restoration
  - Spill Planning & Response
  - Navigation
  - Floodplain management
- Formed by State Governors' joint resolution
- Funded by State dues, grants, and contracts

### UMRBA is not:

- Regulatory
- Formed by interstate compact
- Funded by Section 106 of the Clean Water Act
- Currently engaged in standard-setting, monitoring, or assessment under the Clean Water Act



# Collaboration in UMR CWA Implementation: UMRBA Role - Organizational Options

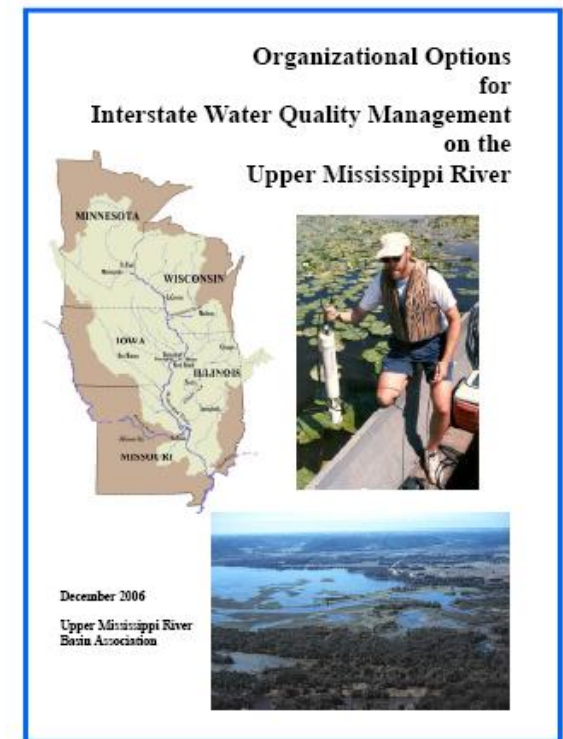
December 2006 Report

Outcome of year-long project funded by  
McKnight Foundation

Involved CWA program administrators from  
five UMR States (Water Quality Executive  
Committee)

## Recommendations

- Establish an interstate water quality agency for the UMR, by building on UMRBA
- States retain authority, UMRBA acts on behalf of, and in cooperation with states
- Initial focus on CWA activities on the main stem
- Five states and US EPA share funding
- Incremental process to expand UMRBA's role



## Collaboration in UMR CWA Implementation: **UMRBA Role - Governors' Statement**

“We are committed not only to the protection of the River’s water quality, but we are also committed to doing so in a coordinated manner.....We are therefore supporting the coordination of water quality monitoring, assessment, and standards for the Upper Mississippi River by the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin and the Upper Mississippi River Basin Association. This approach will allow the Clean Water Act to be implemented on the Upper Mississippi River in a more coordinated and consistent fashion than has ever been possible previously.”

*-From the Statement of the Governors of Illinois, Iowa, Minnesota, Missouri, and Wisconsin on Water Quality Protection for the Mississippi River (August 2, 2007)*

# Collaboration in UMR CWA Implementation: UMRBA Water Quality Work Groups

## Water Quality Executive Committee (2006)

### *State (Voting) Members*

Illinois EPA

Iowa DNR

Minnesota PCA

Missouri DNR

Wisconsin DNR

### *Federal (Non-Voting) Members*

US EPA Region 5

US EPA Region 7

## Water Quality Task Force (1999)

Illinois EPA

Iowa DNR

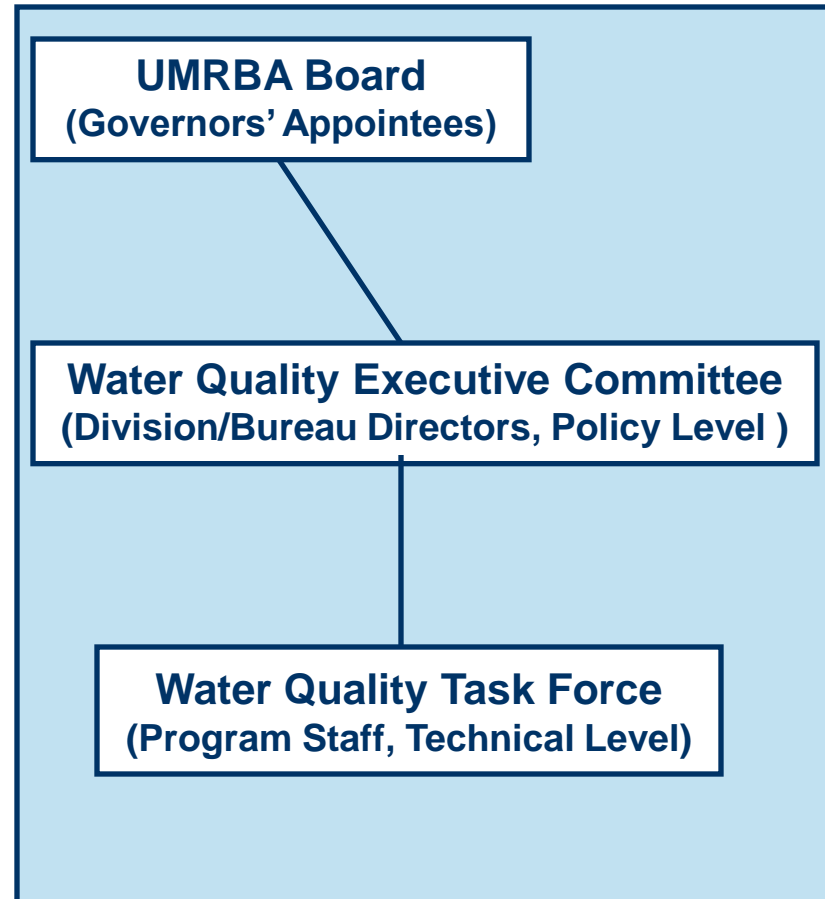
Minnesota PCA

Missouri DNR

Wisconsin DNR

US EPA Region 5

US EPA Region 7



## Collaboration in UMR CWA Implementation: **UMR Water Quality Efforts**

### **Work Areas/Projects**

Uniform interstate assessment reaches

Impaired waters listing consultation

Recent reports (CWA approaches, fish consumption advisories, sediment-related water quality criteria)

Designated uses for the UMR

Collaboration with ecosystem restoration programs

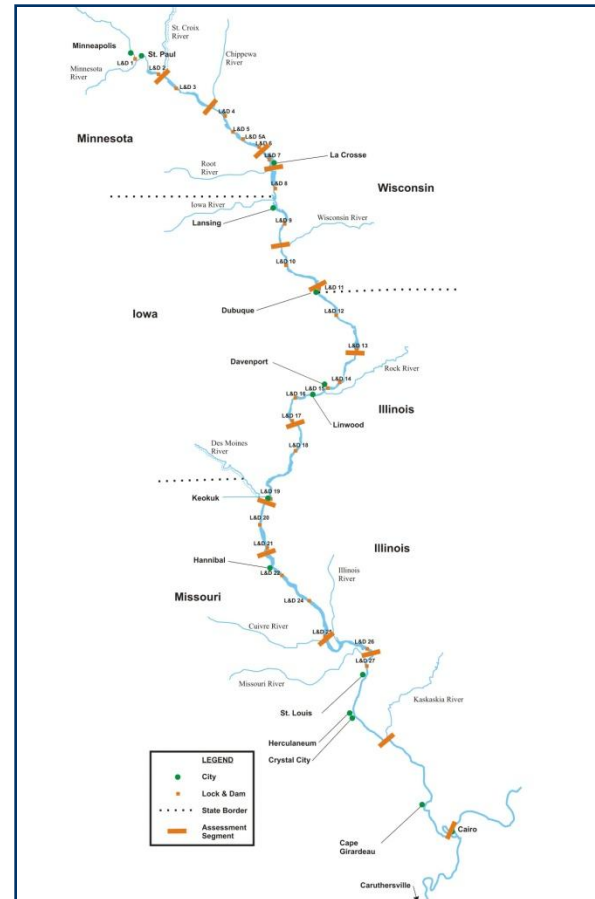
Biological indicators

Web site ([www.umrba.org/wq.htm](http://www.umrba.org/wq.htm))

# Collaboration in UMR CWA Implementation: Uniform Interstate Assessment Reaches

	River Miles	Old # of Reaches	New # of Reaches*
IL	698	15	8
IA	313	14	5
MN	139	31	4
MO	366	2	5
WI	230	3	5

\*Per 2003 MOU



# Collaboration in UMR CWA Implementation: Impaired Waters Listing Consultation

Ongoing consultation  
at Water Quality Task  
Force meetings

Use table structure (at  
right) to compare,  
uniform assessment  
reaches allow for  
comparison

MINNESOTA*			WISCONSIN**	
2006	2008		2008	2006
PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup> Turbidity <sup>AL</sup> Nutrients (L. Pepin) <sup>AR</sup>	PCBs (Fish Tissue) <sup>PC</sup> PFOS (Fish Tissue) <sup>PC</sup> Turbidity <sup>AL</sup> Nutrients (L. Pepin) <sup>AR</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup>	St. Croix River (48 mi)	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup> Suspended Solids <sup>AL</sup> PFOS (Fish Tissue) <sup>PC</sup>	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>
PCBs (Fish Tissue) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup> Fecal coliform <sup>AR</sup>	PCBs (Fish Tissue) <sup>PC</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>PC</sup>	Chippewa River (49 mi)	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>
PCBs (Fish Tissue) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>	PCBs (Fish Tissue) <sup>PC</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>PC</sup>	Lock & Dam 6 (21 mi)	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>
PCBs (Fish Tissue) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup> Turbidity <sup>AL</sup>	PCBs (Fish Tissue) <sup>PC</sup> <i>TMDLs approved:</i> Mercury (Fish Tissue) <sup>PC</sup>	La Crosse Root River (63 mi)	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>
IOWA***				
No listing	No listing			
Aluminum <sup>AL</sup>	Aluminum <sup>AL</sup>	Wisconsin River (48 mi)	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>
No listing	Mercury <sup>PC</sup> (Pool 12)	Lock & Dam 11 Dubuque (61 mi)	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>	PCBs (Water) <sup>PC</sup> PCBs (Fish Tissue) <sup>PC</sup> Mercury (Water) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>
		Lock & Dam 13	ILLINOIS	
			PCBs (Fish Tissue) <sup>PC</sup> Mercury (Fish Tissue) <sup>PC</sup>	PCBs (Fish Tissue) <sup>PC</sup>



# Collaboration in UMR CWA Implementation: Recent Reports

**The States' Approaches to Clean Water Act Monitoring, Assessment, and Impairment Decisions (2004)**

**State Approaches to Issuing and Using Fish Consumption Advisories on the Upper Mississippi River (2005)**

**Sediment-Related Water Quality Criteria for the Upper Mississippi River (2007)**

Upper Mississippi River Water Quality:  
The States' Approaches to Clean Water Act  
Monitoring, Assessment, and Impairment Decisions



January 2004

Upper Mississippi River Basin Association

Upper Mississippi River  
Fish Consumption Advisories:

State Approaches to Issuing and Using  
Fish Consumption Advisories  
on the Upper Mississippi River



August 2005

Upper Mississippi River Basin Association

Issue Paper:  
Sediment-Related Water Quality Criteria  
for the Upper Mississippi River



February 2007  
Upper Mississippi River Basin Association

## Collaboration in UMR CWA Implementation:

# Designated Uses for the UMR

Examine potential modifications to CWA designated uses for the UMR

Look for opportunities to both improve consistency and protection of the resource

Improve ability to address off-channel areas

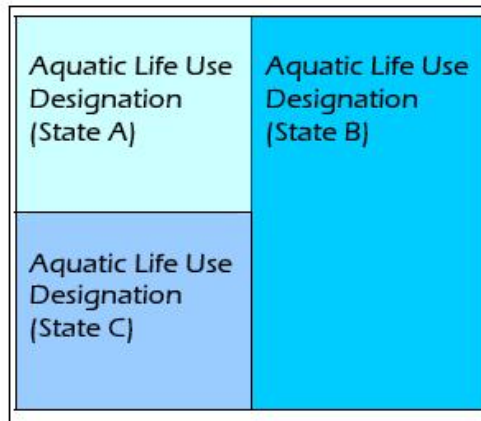
Begin with aquatic life use designations, develop a proposed framework, based on existing data and information about the river

Seek to improve ability to communicate about aquatic life use protection across CWA programs, to other river programs, and to the public at large

Supported by US EPA staff person assigned via IPA to UMRBA through February 2011

# Collaboration in UMR CWA Implementation:

## Designated Uses for the UMR



### States' Current Approach:

- Relatively simple, but may not protect adequately or consistently. Focused primarily on the main channel.
- States' designations and associated criteria may differ (though the states have agreed on 13 assessment reaches for the UMR).
- Distinctions may arise from jurisdiction, rather than river biology or function.

### Reality Is:

- Complex. In addition to lateral diversity (above), there is also longitudinal and temporal diversity.
- Difficult to precisely represent in regulation.

### Goal

Develop a framework that more appropriately protects the resource and is realistic to implement.

Collaboration in UMR CWA Implementation:

## Collaboration with Restoration Programs

Two workshops held in 2008 to examine policy and practice interfaces between Clean Water Act and Ecosystem Restoration programs on the UMR

Areas where opportunities identified:

- 1) Ecosystem restoration objectives and water quality standards
- 2) Biological indicators
- 3) Water quality monitoring
- 4) Watersheds, tributaries, and TMDLs
- 5) Water quality considerations in ecosystem restoration projects

# Collaboration in UMR CWA Implementation: **Biological Indicators for the UMR**

**Builds from 2008 cross-programmatic workshops**

**Also area of interest for the Water Quality Task Force**

**Seeks to capitalize on interest, developments in research in application**

**Workshop held in May 2009, sponsored by US EPA and USACE**

**Final report coming July 2009**

**UMRBA will work with lead agencies to move forward on recommendations**



# Collaboration in UMR CWA Implementation: UMR Water Quality Web Page

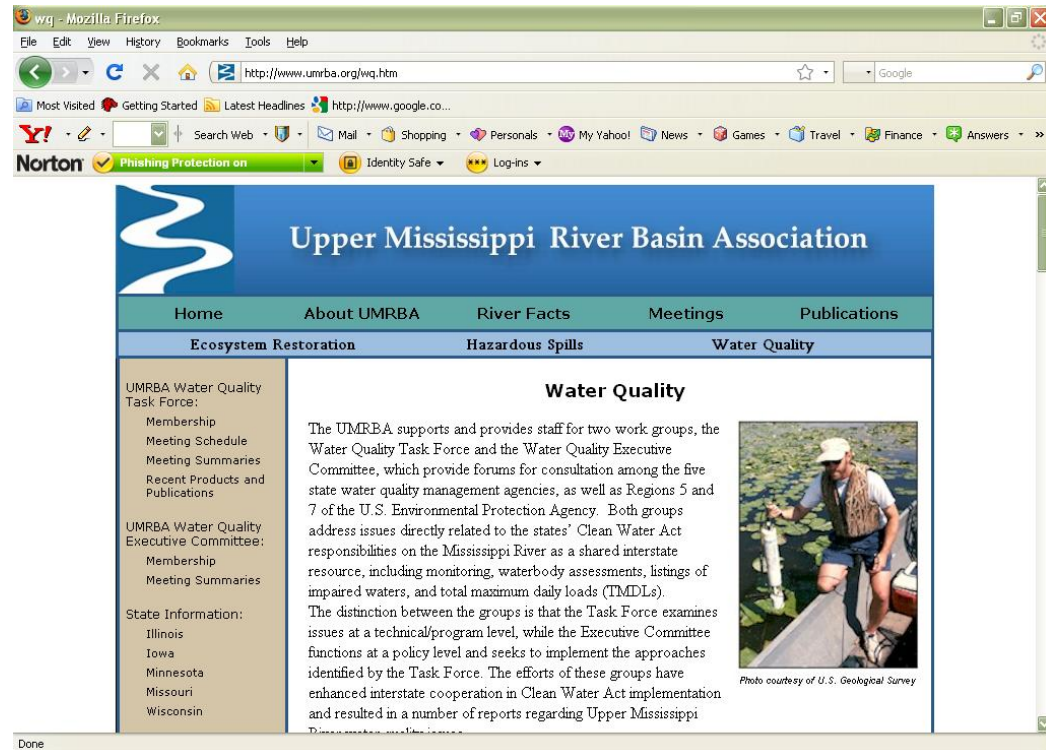
[www.umrba.org/wq.htm](http://www.umrba.org/wq.htm)

UMRBA water quality  
publications

Meeting summaries

Links to state CWA  
programs

Other water quality links





## Collaboration in UMR CWA Implementation: **Lessons Learned to Date**

It's important, but it's not easy

There's a commitment to cooperation and coordination among the agencies involved

Need to involve both program and policy staff (Task Force and Executive Committee)

Need to identify the correct players for topic areas

Dynamic situation: methods, conditions, priorities, and personnel can and do change

As work continues, need to reach out to other stakeholders to help build support for UMR efforts

# Future Efforts and Directions

Continued collaboration and consultation via Water Quality Task Force

Completion of biological indicators report

Recommendations for aquatic life use designations

Multi-state proposal to support:

- 1) Integration of biological approaches into CWA assessments
- 2) Examination of “local” impacts of nutrients on the UMR from a CWA perspective
- 3) Continued cross-programmatic collaboration

Ongoing efforts to engage other UMR stakeholders (e.g. WQ NGOs)





**Upper Mississippi River Basin  
Association**

# Questions?

**For More Information, Contact:**

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